



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/505,351

08/19/2004

Yukio Wada

91197.000013

5979

23387

7590

06/23/2006

Stephen B. Salai, Esq.  
Harter, Secrest & Emery LLP  
1600 Bausch & Lomb Place  
Rochester, NY 14604-2711

EXAMINER

TOLAN, EDWARD THOMAS

ART UNIT

PAPER NUMBER

3725

DATE MAILED: 06/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/505,351	WADA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Edward Tolan	3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1-6-2005</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

### ***Priority***

Applicant should provide an amendment to the beginning of the specification stating the 35 USC 371 priority data.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to which method steps are to be followed in the claim. Are A and B meant to be alternative methods or are they method steps?

Claim 7 recites the limitation "said annular reference surface" in line 6. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putz et al. (6,253,589) in view of Gotou et al. (6,530,253). Putz discloses a method for forming an internal gear with helical teeth wherein cylindrical raw material (9) is inserted onto a forming die (2) having an outer gear part (3) and a forming roll (10) is moved in an axial direction against the raw material in order to form the gear part. In column 3, lines 25-32 Putz discloses that the forming roll and forming die are relatively rotated in relation to one another. Putz does not disclose an annular weir part. Gotou teaches (figure 2) that it is known to provide an annular weir part (inner peripheral corner of cylindrical portion 7c) that is an annular reference surface. The reference surface (weir) has a diameter that is equal to a tooth tip (7e) diameter (at t2). Gotou teaches a forming die (20, figure 4) that has an annular forming surface with a circular configuration (end of groove 20a) and an escape portion (20c). It would have been obvious to one skilled in the art at the time of invention to provide the gear of Putz with an annular weir part as taught by Gotou in order to strengthen an interior corner of the gear. It would have been obvious to one skilled in the art at the time of invention to provide the gear of Putz with an escape portion as taught by Gotou in order to provide a connecting rim of a differing diameter.

Claims 3,4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putz in view of Gotou and further in view of Sakaguchi (6,279,366). Putz in view of Gotou does not disclose a plurality of forward and reverse rotations of the forming die or forming roll. Sakaguchi teaches that it is known to rotate a forming die (2,3) and a forming roll (10) in forward and reverse rotating directions for a plurality of rotations. It

Art Unit: 3725

would have been obvious to one skilled in the art at the time of invention to rotate the forming die or forming roll of Putz in view of Gotou a plurality of time in order to improve the accuracy of the teeth formation.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to Ed Tolan whose telephone number is 571-272-4525. FAX communications should be sent to 571-273-8300.

EDTOLAN  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to be 'Ed Tolan', written over the printed name and title.